REMARKS

The Examiner's attention to the present Application is greatly appreciated.

Claims 4-6 and 15-20 are pending in the present Application. Claims 15-20 have been allowed. Claims 4-6 have been rejected under 35 U.S.C. §103.

Respectfully, the prior art alone or in combination, does not suggest the subject matter of claims 4-6. Accordingly, it is requested that the rejection of these claims be withdrawn for the reasons that follow.

REJECTION UNDER 35 U.S.C. §103

In the recent Office Action, claims 4 and 5 were rejected under 35 U.S.C. §103 as unpatentable over *Harris* (U.S. Publication No. 2003/0209542) in view of *Wefers* (U.S. Publication No. 2002/0017033). Claim 6 was rejected under 35 U.S.C. §103 in view of the combination of *Harris* and *Wefers* and further in view of *Wefers* again (Page 5). Respectfully, Applicant disagrees that *Harris* and *Wefers*, either alone or in combination, suggests the subject matter of claims 4-6.

Determination of Obviousness

Application of the Graham Factors is a fundamental determination of obviousness. The Graham test includes four parts which must be applied in each and every case. *Graham v. John Deere*, 383 U.S. 1 (1966). These factors include:

1. determining the scope and contents of prior art;
2. ascertaining the differences between the prior art and the claims in issue;
3. resolving the level or ordinary skill in the pertinent art; and
4. evaluating evidence of secondary considerations.

As stated by the Supreme Court in *KSR International Co. v. Teleflex, Inc.*, "While the sequence of these questions might be reorganized in any particular case, the factors continue to define the inquiry that controls." *KSR International, Inc. v. Teleflex, Inc.*, 82 U.S.P.Q.2d 1385 (2007) (hereinafter "*KSR*").

Once the Graham factors have been analyzed, the burden is on th Examiner to establish a *prima facie* case of obviousness. If this *prima facie* case is note established, the Applicant is under no obligation to submit evidence or argument of non-obviousness. Though the teaching/suggestions/motivation test is no longer the sole analysis for determining obviousness, "rejection on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR* at 1936.

To reach a proper determination under 35 U.S.C. §103, the Examiner must step backward in time and into the shoes the worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. The tendency to resort to "hindsight" based on the Applicant's disclosure is often difficult to avoid. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. (MPEP §2142).

Applicant's Invention

Applicant's invention of Claims 4 - 6 is directed to a conditioning system for sterilizing products including a tunnel having two pairs of parallel sidewalls to form a tunnel having a substantially quadrilateral cross-section. The conditioning system further includes a plurality of pressure sealing doors to seal at least one stage to form a gaseous tight seal pressurizeable stage, as well as pressurizing means for controlling the pressure of said pressurizeable stage for increasing the pressure to a sufficient level to prevent seal packages from bursting upon application of heat. The conditioning system is provided with a heating means including first and second sets of microwave sources wherein a first set of microwave sources is directly connected to a first sidewall and a second set of microwave sources is directly connected to a second opposing sidewall so that microwave energy emanates from said first microwave sources from a first side of said products and microwave energy emanates from said second microwave sources from an opposite side of said products.

Applicant has also amended Claim 4 to include the limitation that the first and second sets of microwave sources emit microwaves at a right angle to the axis of advance products advancing through the tunnel. Disadvantageously, positioning the microwave sources at right angles increases microwave coupling in corresponding hot spots within the microwave chamber. However, more importantly, the positioning of the microwave sources at right angles to the advance of products within a quadrilateral tunnel enables one to mathematically model standing wave patterns within the exposure cavity. As explained in greater detail below, and as explained in the Supplemental Declaration of Jeffrey Mackay submitted herewith, this is not possible within the prior art microwave tunnels, particularly *Muller*.

Harris

Harris describes a food conditioning tunnel employing microwave processing. As conceded by the Examiner, the *Harris* tunnel is not pressureizable. Moreover, though *Harris* describes the shape of the tunnel as "generally rectangular" (See Para. 35), the drawings appear to illustrate a sheet metal construction almost helical in structure, in similar manner is a paper clip to form multiple cavities. Thus, though *Harris* describes a tunnel that is "generally rectangular" it is not a true rectangular structure as claimed by Applicant.

Of importance, *Harris* does not provided any suggestion that the housing provides any particular benefits to the product conditioning process. For example, *Harris* explains that the tunnel includes reflectors 102 mounted below the food product. (41). The reflecting surfaces may be "curved to focus or diffuse microwave energy". (Para. 37). Thus, the structure of the

Harris tunnel is not important for effecting the microwave field as additional reflectors are utilized for this purpose. Thus, there is no suggestion within *Harris* promoting a "generally rectangular" structure as opposed to any other structure for promoting a consistent predictable heating pattern, or at least one capable of being modeled.

Also importantly, the *Harris* tunnel includes a "chamber 34 surrounded by a water tank 94". (Para. 47). In other words, the tunnel walls are hollow so as to store water for other aqueous solution preferably containing propylene or ethylene glycol. Further, the water tank walls are described as made of a material which is transparent to microwave energy, such as a high density plastic polyethylene. As understood by those skilled in the art, a plastic such as polyethylene would not not be considered ideal as a pressure vessel.

Wefers

Wefers illustrates a microwave tunnel for drying food products. The conveyor transports products within dishes or nets on which products are applied.

Wefers provides no description of the cross-section of such chambers. Moreover, *Wefers* provides no explanation of the exposure area and how it would relate to the microwave process. However, if an exposure area were implied, one skilled in the art would consider the tunnel shape to be circular so as to have a cylindrical structure because such structures were well known as providing optimal structural benefits within pressurized applications due the shape's capability of withstanding increased stress and strain.

Wefers also does not provide any suggestion for the tunnel to be pressurized sufficient to present packages from bursting. *Wefers* explains that the tunnel may be used for reduced atmospheric pressure of about 20-100 mbar. Further, there is a comment that the tunnel may be utilized at a pressure which is higher than “atmospheric pressure” for drying tea. (Para. 18). However, there is no suggestion within *Wefers* that the tunnel be capable of pressurization to a sufficient pressure to prevent packaging from bursting.

ANALYSIS

Pursuant to *KSR*, there must be a rationale for references to be combined in the manner of a claimed invention for the invention to be considered obvious. Here, there is no suggestion for combining *Harris* and *Wefers* to create Applicant’s invention. To the contrary, as explained in greater detail in the Declaration of Jeffery Mackay submitted herewith, there is no *rationale* for combining *Harris* and *Wefers* in a manner to duplicate Applicant’s claimed invention.

First, the combination of *Harris* and *Wefers* does not create a food conditioning tunnel which is pressurized to a sufficient pressure to prevent packages from bursting. The *Harris* tunnel is not pressurized in any way. Meanwhile, *Wefers* suggest only that the pressure may be greater than atmospheric and describes products that are not within packaging. Thus, there is no disclosure of a food conditioning tunnel providing pressure sufficient to prevent packages from bursting. Notably, it is a fundamental axiom of patent law that the prior art references must disclose each of the claimed features for a claim to be obvious. Here, the claim limitation that the tunnel is pressurizeable to sufficient pressure to prevent packages from bursting is not disclosed in the prior art.

Secondly and more clearly evincing the patentability of the present invention, the combination of *Harris* and *Wefers* does not suggest a pressurizeable quadrilateral tunnel. *Harris* does suggest that a structure may be "generally rectangular" for a **non-pressurized** tunnel. However, as explained in the Declaration of Jeffrey Mackay (Para. 12-16), there is no suggestion within *Harris* that the tunnel shape would effect the microwave field or in other way be beneficial for the processing of food products. To the contrary, no engineer in his right mind would think to take a tunnel comprising plastic hollow sidewalls filled with water and think to pressurize such a structure. To the contrary, the right angles of a rectangular tunnel would be prone to failure. To the contrary, persons skilled in the art reading *Harris* would never rationally introduce pressure into such a structure.

Meanwhile, *Wefers* provides no teaching concerning the shape of a food conditioning tunnel. However, there was, and continues to be, a prevailing opinion by those skilled in the art that pressurized tunnels should be cylindrical, not rectangular. See for example *Ruozi* (U.S. Patent No. 5,074,200) and the Declaration of Jeffrey Mackay (Para. 21-26). Thus, since *Ruozi* and the understanding by those skilled in the art evidences that pressurized food conditioning tunnels should be cylindrical, and *Harris* and *Wefers* provide no contradictory disclosure, Applicant's invention of a pressurizeable quadrilateral tunnel with microwave sources affixed to opposing sidewalls could not be considered obvious.

Accordingly, claims 4-6 are patentable.

CONCLUSION

Claims 15-20 have been indicated as allowable and claims 4-6 are believed to be in condition for allowance. Notice thereof is respectfully requested.

If there are any remaining issues that need to be resolved, it is requested that a telephone call be placed to the undersigned.

Respectfully submitted,

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